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FEB 06 2008
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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/680,568
Filing Date: October 7, 2003
Applicant: Sivakumar Ramasamy, et al.
Group Art Unit: 1775
Examiner: John J. Zimmerman
Title: WELD BRACKET
Attorney Docket: 0275M-000667

Director of the United States Patent and Trademark Office
P.O. Box 1450
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DECLARATION OF DR. SIVAKUMAR RAMASAMY UNDER 37 CFR 1.132

Sir:

I, Dr. Sivakumar Ramasamy, state as follows based on my personal knowledge:

1. I have a doctoral degree in Welding Engineering from Ohio State University.
2. I have worked for The Black & Decker Corporation ("Black & Decker") as a R & D Manager, and have worked at Black & Decker for 10 years.
3. I have worked in the manufacturing/welding industry for 12 years.
4. The purpose of the present invention was to create a flange to a structure fastening system where a flange is welded to a thin sheet of metal having a thickness of less than 1.2 mm.
5. Traditionally, a bracket, end welded to sheet metal having a thickness of less than 1.2 mm suffers from a burn-through failure mode during welding.
6. It is the intent of the claimed invention to overcome the aforementioned failure mode.
7. To overcome this failure mode, an L-shaped bracket is provided having a body portion with a thickness greater than 1.2 mm and a flange portion coupled perpendicular to the body portion.
8. The flange portion has a depth equal or greater to the thickness of the sheet metal surface plus the second thickness, and which is less than 5.

9. Those skilled in the art would not recognize that the aforementioned limitations would overcome the burn-through failure mode as they would not look to a flanged body to improve welding to a thin sheet.

10. The present invention, as described above, provides a weld bracket than can be welded to sheet metal having a thickness of less than or equal to 1.2 mm and which will not suffer burn-through during welding.

11. The lack of burn-through is an unexpected result.

12. This unexpected result allows a larger range of weld currents to produce acceptable welds.

13. Additionally, a larger range of weld times produces acceptable welds.

14. It is not clear from the prior art references that they will produce the aforementioned results.

15. It is not clear that the flanged bracket of 5,273,246 will have the dimensional requirements which allow the welding of the bracket to sheet metal having a thickness of less than 1.2 mm in a manner which does not cause burn-through.

16. It is not obvious from the text or figures of U.S. Patent 5,273,246 that the brackets shown therein can be modified to be welded to sheet metal having a thickness of less than 1.2 mm.

17. Upon information and belief, it is my opinion that the results of the claimed invention are surprising and unexpected. The results are surprising and unexpected because an acceptable weld is produced at a wider range of current and weld times.

18. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: 2/6/08

Signed: ______________________
Dr. Sivakumar Ramasamy